

Fig. 1. (PRIOR ART)

2 6 7

$V_{s11} = 2 \log V$

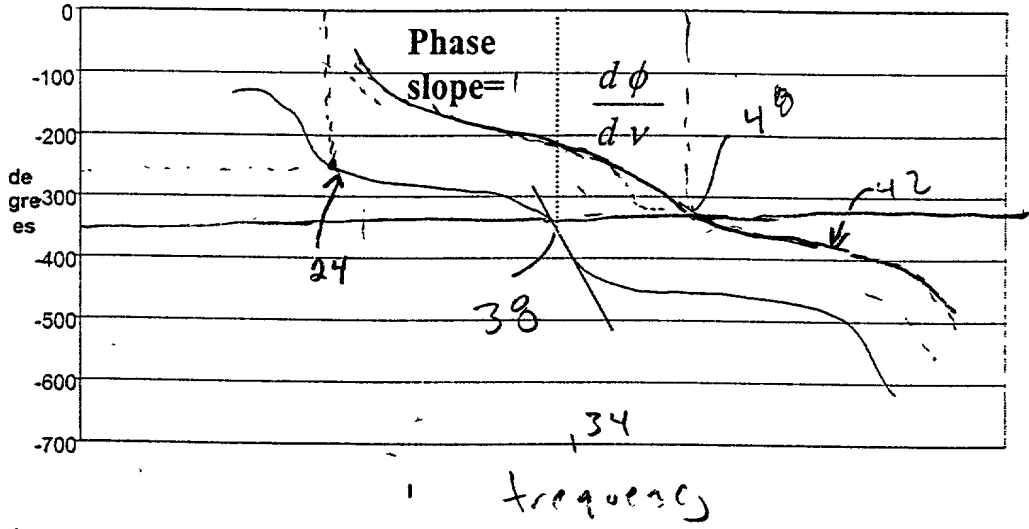
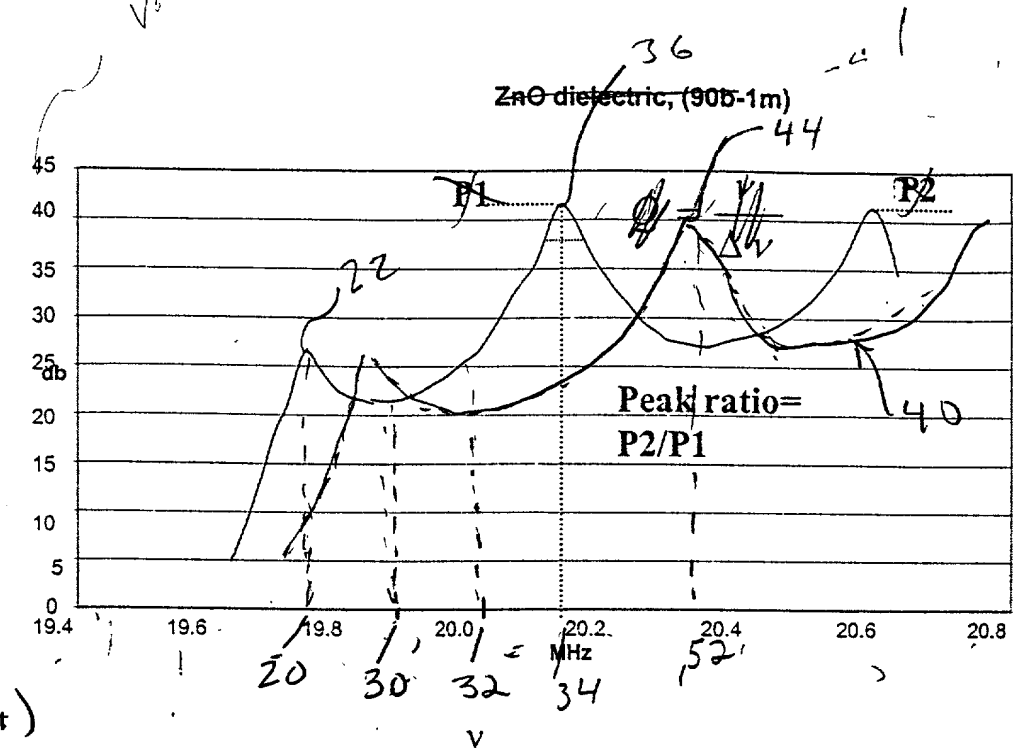


Fig 2
 (PRIOR ART)

Fig 3
 (PRIOR ART)

Figure 1: Transmitted magnitude and phase response of an FPW sensor

3047

$f(\theta) = A \cos \theta$
 describes wave form
 $f(x) = A \cos \omega t$

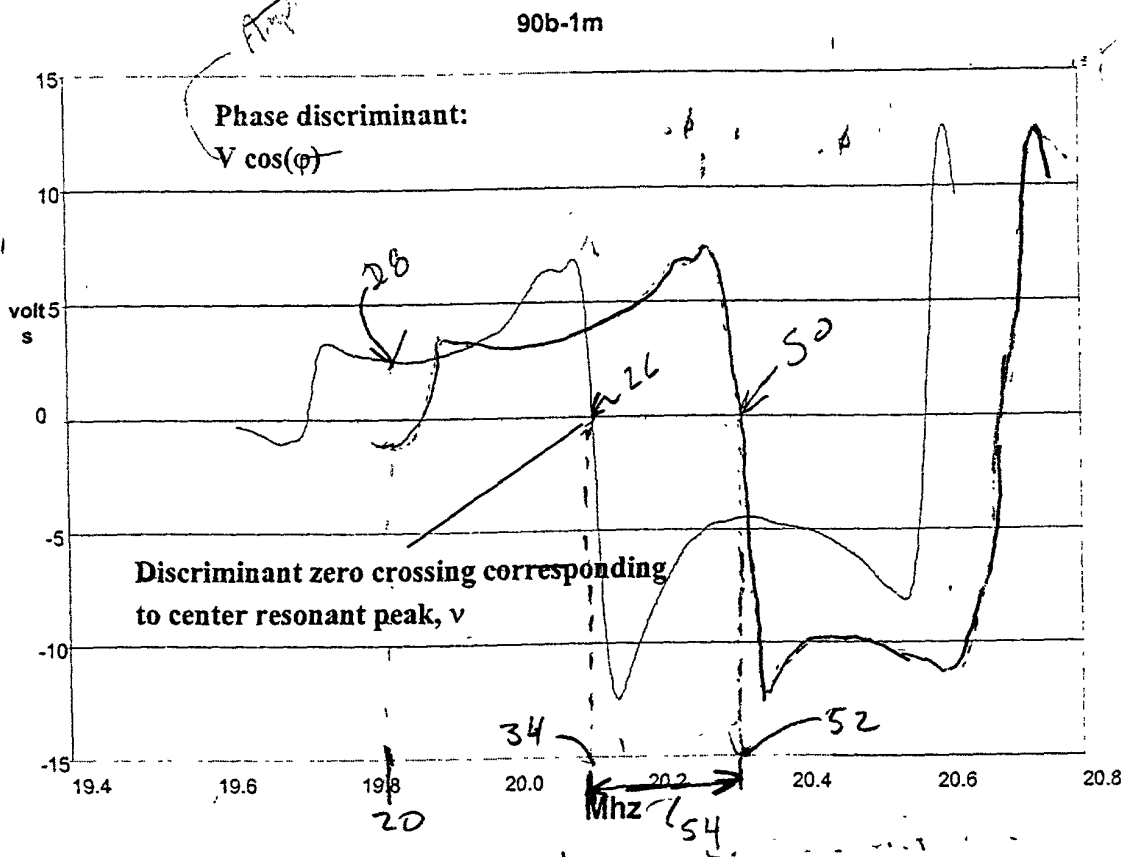


Figure 2. Derived sensor response used in the phase locked oscillator readout circuit

Fig 4 (PRIMA ART)

467

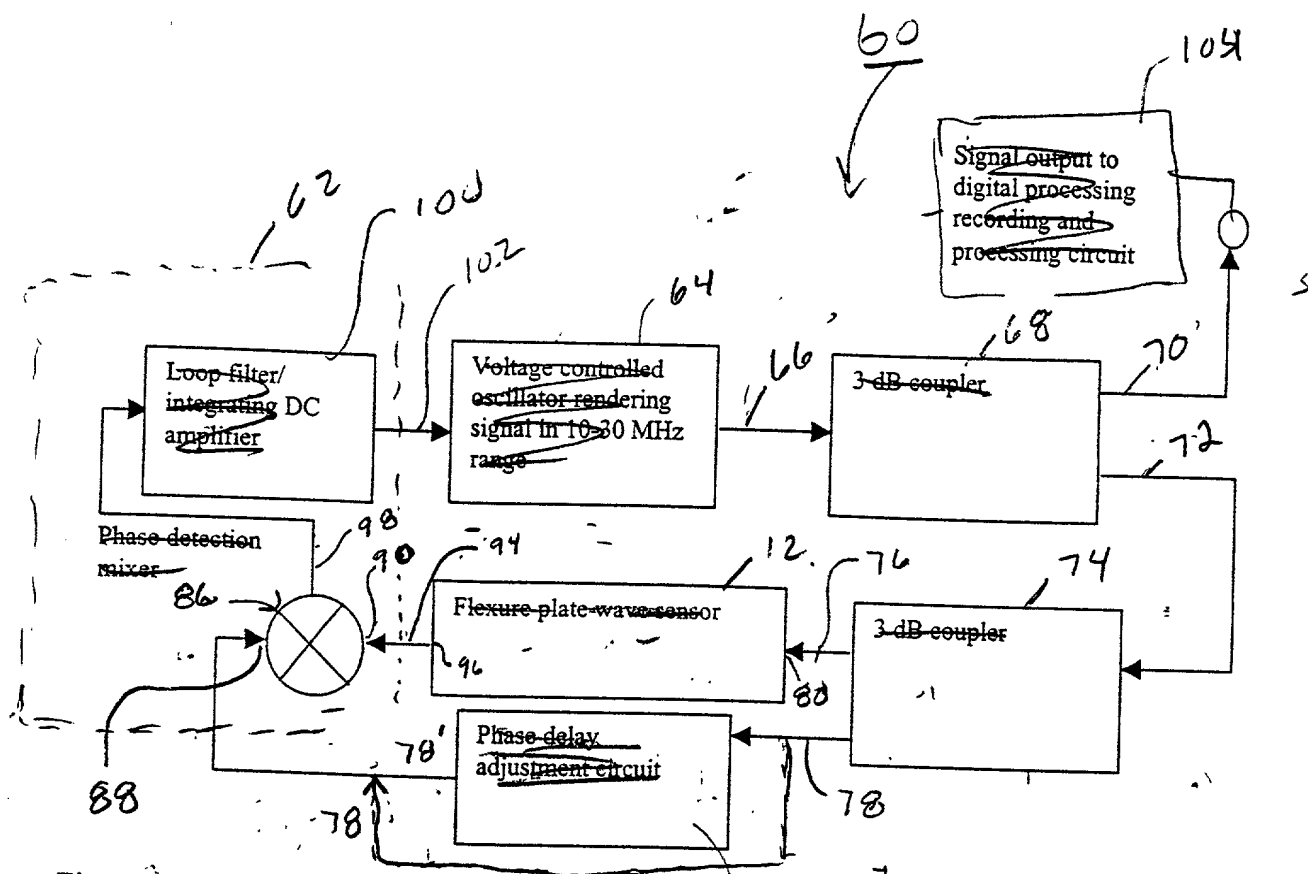


Figure 3—Basic Flexure Plate Wave resonator readout circuit with frequency-signal output

Fig 5

82

597

Chem Sensor/ PLL Oscillator- Board 2

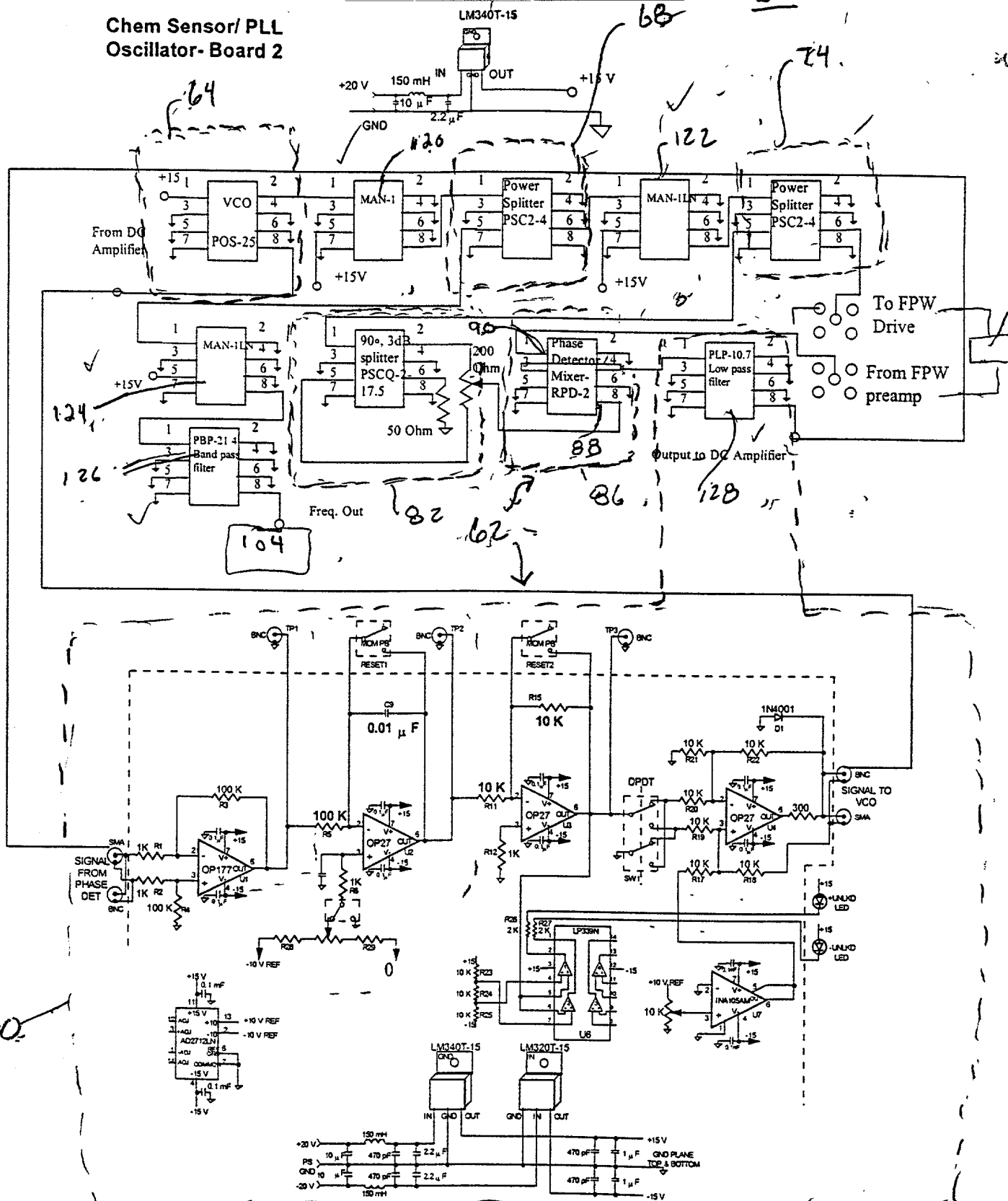


Figure A-1: Phase locked oscillator circuit applied to reading out silicon FPW.

Fig 6.

667

60''

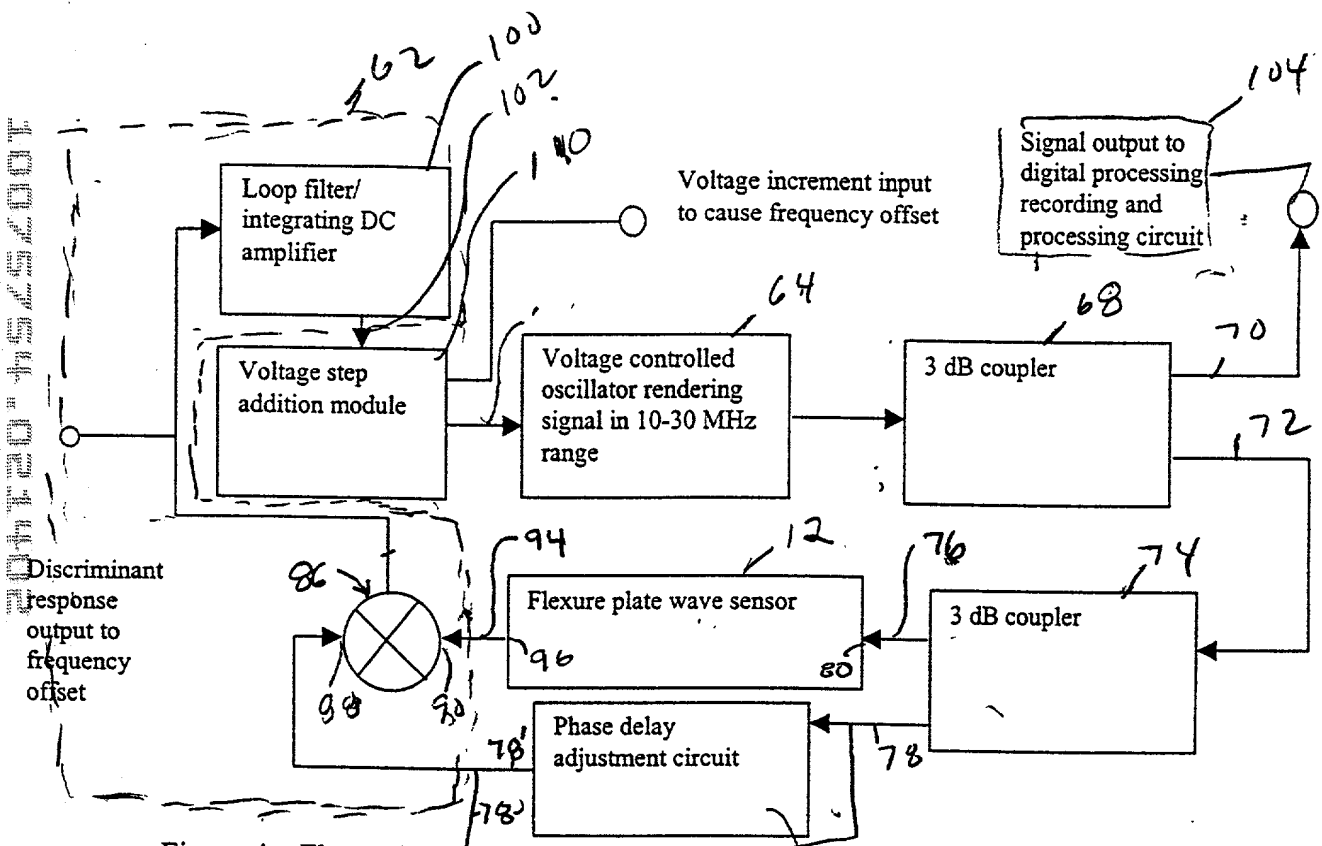


Figure 4: Flexure Plate Wave Resonator Readout circuit with frequency signal output and resonant peak Q measurement implementation

Fig 7.

82

7 4 7

Detecting the phase difference
between an output signal of a sensor
and the input signal to a sensor

200

Maintaining a fixed phase difference between
the output signal and the input signal

201

Adjusting the phase difference between
the output signal and the input signal
to a predetermined fixed phase
difference.

202

Fig. 8